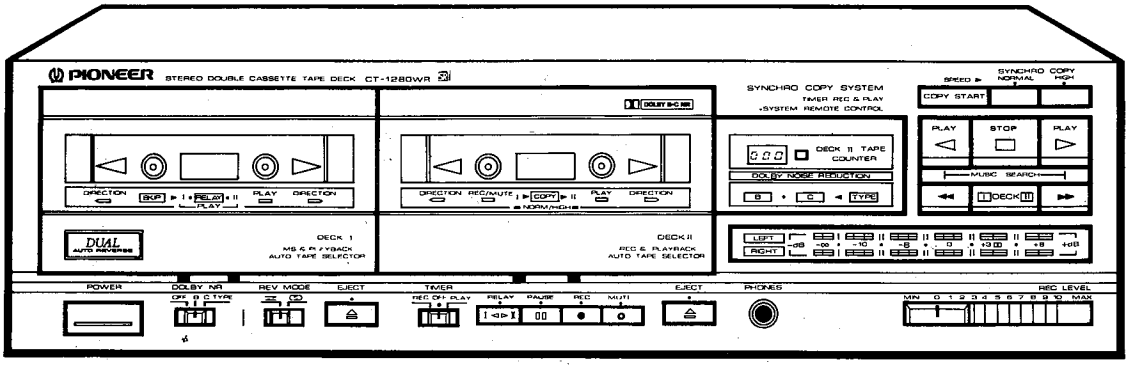
Operating Instructions

STEREO DOUBLE CASSETTE TAPE DECK
CT-1280WR



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

LINE VOLTAGE SELECTOR SWITCH

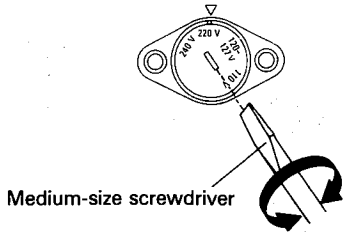
Only multi−voltage models are provided with this switch. U.S., Canadian modeles are not provided with this switch.

Mains voltages Saudi Arabia are 127V and 220V only.

Never use this model with 110V setting in Saudi Arabia.

The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC outlet. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Disconnect the power cord.
2. Use a medium-size screwdriver.
3. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value of your area.



"This product is manufactured to comply with the radio interference requirements of EEC Directive 76/889/EEC and 82/499/EEC."

PIONEER®
The future of sound and vision.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the ap- pliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

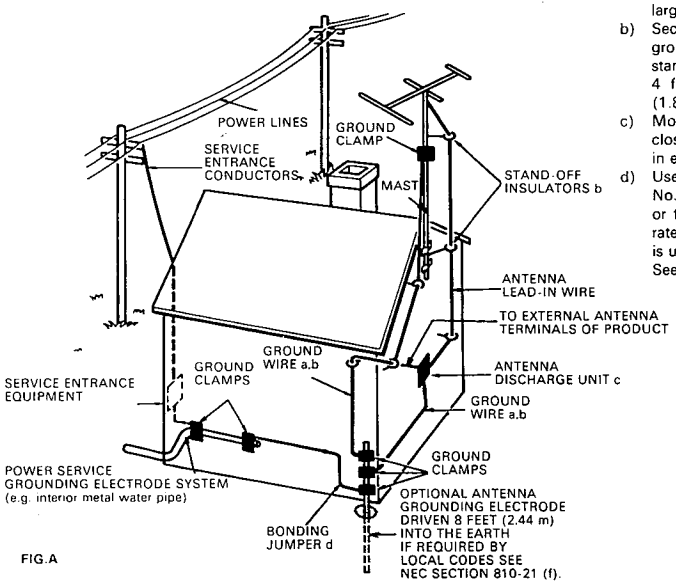

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
SERVICE ENTRANCE EQUIPMENT
ANTENNA DISCHARGE UNIT c
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).
BONDING JUMPER d

FIG.A

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.

b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.

c) Mount antenna discharge unit as closely as possible to where lead-in enters house.

d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off. Disconnect the wall plug when the equipment is not in (regular) use, e.g. when on vacation.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Equipment sold in the U.K. is not supplied with a power plug.

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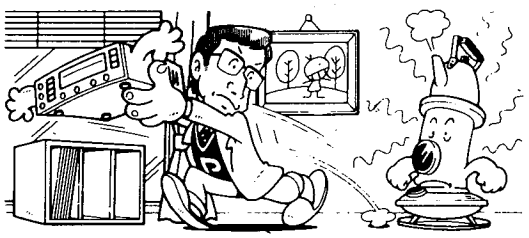
INSTALLATION

When installing the deck, avoid locations with high temperature or humidity, and be sure that the location is well ventilated.

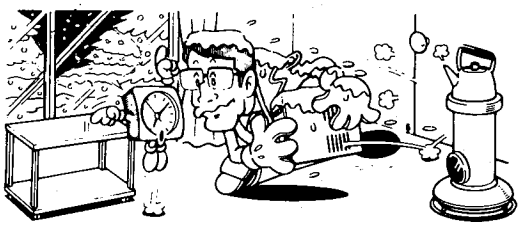
Do not install the deck in locations subject to direct sunlight, or next to a space heater or other heating device, since the finish or internal parts may be affected adversely. Malfunctions may also result if the unit is installed in a humid or dusty location (also avoid installations next to kitchen counters or other places subject to oily smoke or heat).



- If you place the unit directly on top of an amplifier, it may pick up hum or other noise. Also, if the amplifier generates a large amount of heat, the unit may break down.
- If you place the unit near a television set, it may pick up noise which may be recorded as a whistling tone on the tape. In such a case, either install the unit away from the television set or switch OFF the television set.

DEW CONDENSATION

When the unit is moved from a cold to a warm room, or the temperature changes quickly, condensation will form on the mechanical parts and this will affect the performance of the tape. In such cases, leave the unit in a warmer atmosphere for about one hour or change the room temperature gradually.



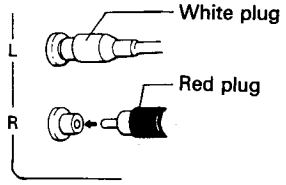
NOTE:
When installing the tape deck, do not place a cloth over the top or block the ventilation openings in any other way.

CONNECTIONS

- Read through the operating instructions of the stereo components which you intend to connect to this unit.
- Turn on the power only after all the connections are completed.
- The top jacks are for the left (L) channel; the bottom jacks are for the right (R) channel.
- Make sure that the plugs are inserted securely. Improper connection may generate noise.

■ Connecting the input/output cords

Connect the plugs properly.

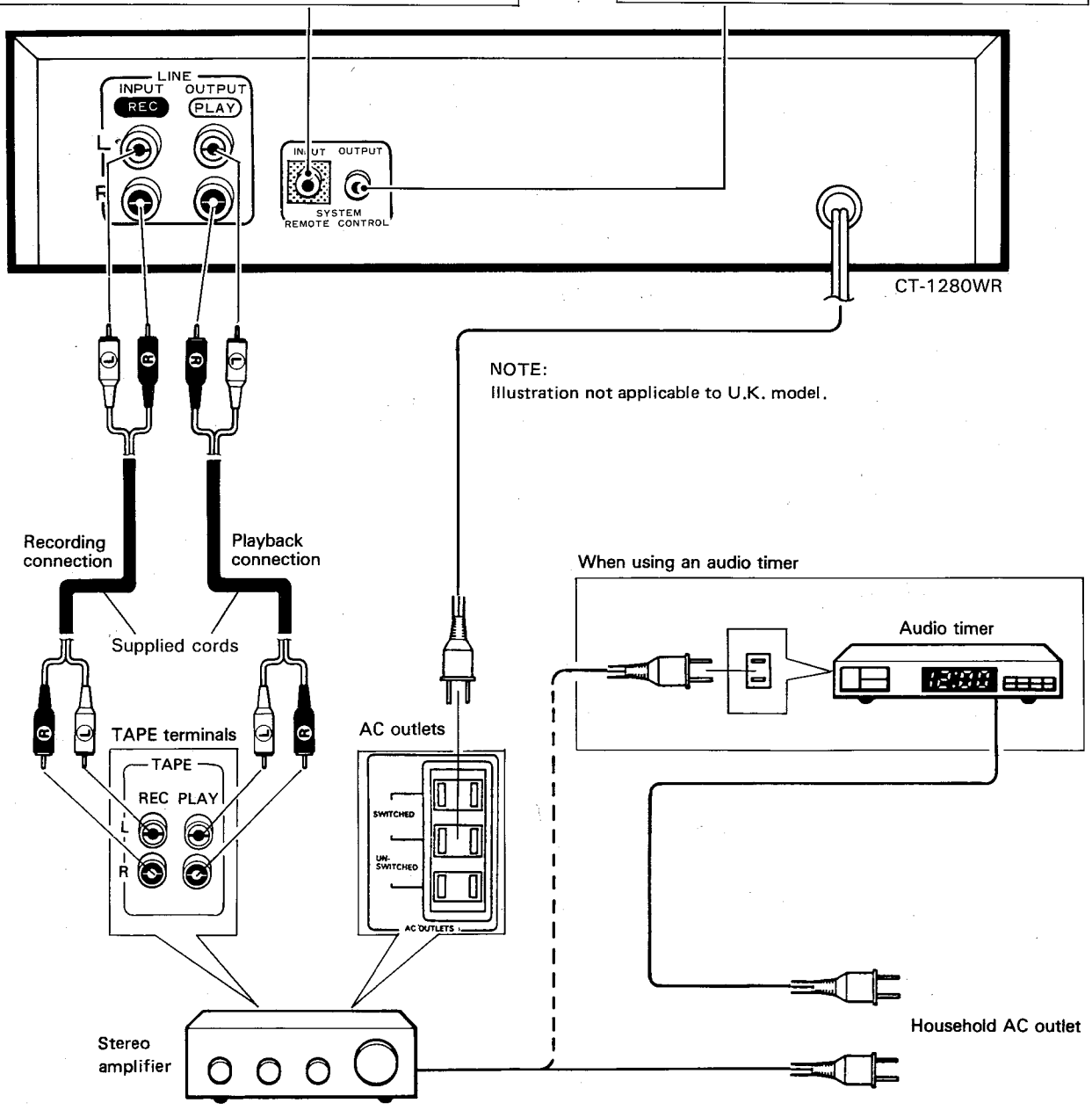


CONTROL INPUT JACK

This terminal is provided only on the following models: KU (for U.S.), KC (for Canadian), SD (for general market), SD/G (for military). When the CONTROL OUT terminal of PIONEER components with the SR mark and with a remote control unit is connected with the accessory control cord, then that remote control unit can be used for remote control. (For details, refer to the operation manual of the respective component.)

CONTROL OUTPUT JACK

This terminal is provided only on the following models: KU (fur U.S.), KC (for Canadian), SD (for general market), SD/G (for military). This can be connected to the control input jack on any PIONEER component with the SR mark.



HOW TO HANDLE CASSETTE TAPES

CHECK CASSETTE BEFORE USE

Bear in mind the following points before loading cassette tapes.

Is the tape loose, or is some of the tape outside the cassette?

If some of the tape is projecting outside the cassette shell or if it is loose, it may not enter between the capstan and pinch roller. This will prevent the tape from being supplied or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack (Fig. A).

Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

What are the accidental erasure prevention tabs for?

A cassette is provided with these tabs so that important or otherwise valuable recordings will not be erased accidentally.

When the tab (Fig. B) on the cassette shell is broken off with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the recording (REC) switch, so valuable recordings will not be erased in error.

To re-record a cassette on which tabs have been broken off, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.

In case of metal tape or chrome tape, take sufficient care that the detection hole (Fig. D, Fig. E) is not blocked.

When this hole is blocked, the automatic tape selector mechanism does not operate correctly.

NOTE:
The accidental erasure prevention tabs are located at the top left on both sides A and B (1 or 2), so that material on each side can be prevented from being erased in error.

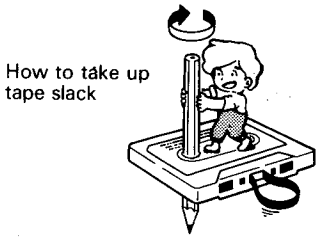


Fig. A

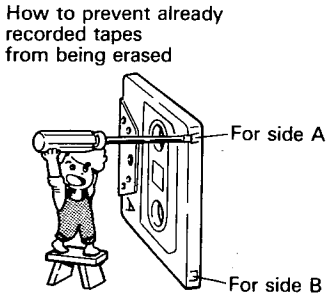


Fig. B

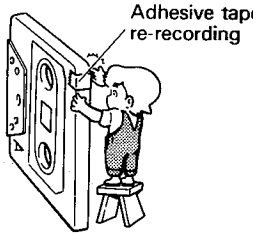


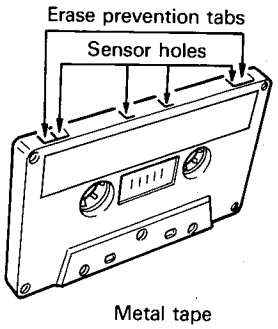
Fig. C

AUTOMATIC TAPE SELECTOR FUNCTION

This unit (Deck I and Deck II) is equipped with an automatic tape selector function which utilizes the sensor holes on the tape cassette to determine the type of tape being used, in order to set the deck to match the tape's recording bias and equalization.

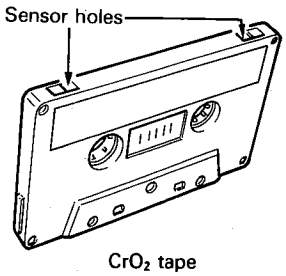
REGARDING THE TAPE CASSETTE SENSOR HOLES

- Do not use FeCr tapes with this unit.
- When using metal tapes, be sure the tape cassettes have sensor holes.



Metal tape

Fig.D



CrO_2 tape

Fig. E

TIPS ON USING CASSETTE TAPES

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for about 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt and oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit.

FRONT PANEL FACILITIES

DECK I: For playback
DECK II: For playback/recording

Recording Operation buttons

- ● : This is called REC button. DECK II can be used for recording. Select DECK II with the Deck Selector button and press the REC button to start recording.
- ▯▯ : This is called the PAUSE button. When pressed while recording, the tape stops temporarily. Press again to restart recording at the desired timing.
- O : This is called the recording MUTE button. When pressed while recording, no sounds are recorded for approximately 4 seconds, then the player unit enters the REC/PAUSE mode.

RELAY button (I ◁ ▷ II)

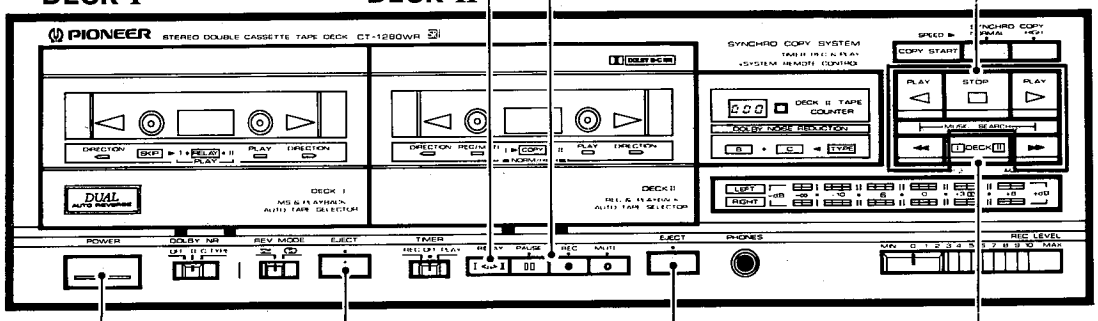
When this button is pressed (the DECK I RELAY indicator will light), playback is relayed from DECK I to DECK II vice varsa. Also, if playback continues for more than 15 seconds with no sound, the fast forward function is activated to rapidly move the tape to the beginning of the next song and start playing back. This is called the blank skip function.

Playback Operation buttons

These buttons are used to playback using the deck selected with the Deck Selector button.

- ◁ : This is called the PLAY button. When pressed, the side of the deck facing inward (side A or B) will play.
- □ : This is called the STOP button. When pressed, all tape travel operations will stop. For example, recording with DECK II, dubbing from DECK I to DECK II, etc., will stop when this button is pressed.
- ▷ : When this button is pressed, the side of the deck facing outward (side A or B) will play.
- ◀◀ : This winds the tape onto the left reel of the cassette. When pressed during playback mode, the currently-playing song track will be skipped and playback will start from the beginning of the next track. This is called Music Search.
- ▶▶ : This winds the tape onto the right reel of the cassette. When pressed during playback mode, Music Search can be performed.

DECK I DECK II



POWER switch

When this switch is pressed to turn on the power, the DIRECTION indicator lights to show that the tape will travel in the direction of the [▷] mark.

NOTE:
The unit's POWER switch is designed to select the transformer's secondary and so even at the stand-by position, the unit's circuitry will work as long as the power cord is connected to power outlet. Disconnect the power cord from the power outlet when you do not plan to use the unit for a long period time.

Deck Selector button (Indicator [I] DECK [II])

This button is used to select DECK I or DECK II. Press the part marked [I] or [II] to select the desired deck. The lighted side indicates which deck can be operated.

EJECT buttons (DECK I and II)

These buttons are used when loading and ejecting cassette tapes. Press to open the cassette door.

Cautions concerning tape travel
Never press the EJECT button while the tape is moving. Always press the STOP button (□) first to stop the tape. Do not turn off the POWER switch while the tape is moving because the cassette door may not open. If the power is turned off by mistake, press the POWER switch again and then press the EJECT button to remove the cassette.

Noise Reduction switch

This switch is used to activate the Dolby Noise Reduction System. For details, refer to "NOISE REDUCTION SYSTEM" on page 19.
For dbx position:
When the switch is set to the dbx position, the dbx noise reduction system will be activated (for only SD, SD/G models). See page 19 for details.

NOTE:
There are both B and C types of Dolby NR. Always use the same type for recording and playing back the same tape. Making a memo on the cassette is helpful for remembering which type was used.

- Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

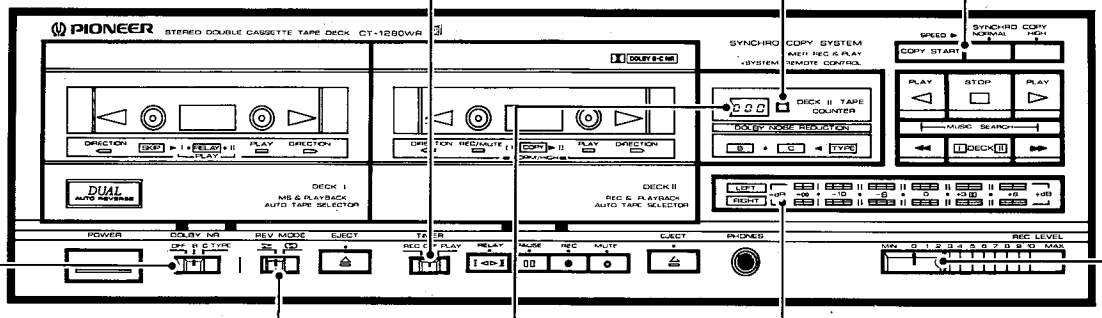
- dbx is a trademark of dbx Incorporated.

TIMER switch

This switch is used for timer recording and playback when the optional Timer is used. Leave this switch off at all times when these functions are not being used.
REC: Timer recording
PLAY: Timer playback
Timer playback is possible with either DECK I or DECK II, but only DECK II can be used for timer recording.
Relay playback to DECK II is possible by starting playback with DECK I with tapes loaded into both DECK I and DECK II. If playback continues for more than 15 seconds with no sound, the fast forward function is activated to rapidly move the tape to the beginning of the next song and start playing back. This is called the blank skip function.

SYNCHRO COPY buttons

Tapes can be copied from DECK I to DECK II by loading a pre-recorded tape into DECK I and a blank tape into DECK II.
NORMAL: Starts copying at normal recording speed
HIGH: Starts copying at twice the normal recording speed



Reverse Mode switch (REV MODE)

This switch can be used for both DECK I and DECK II.
: This switch is used to record and playback one side of a tape. The tape will stop automatically when fully rewound.
: Unless the STOP button is pressed, both sides of the tape will be played back 6 times each (total of 12 sides). Both sides of the tape can be played another 6 times by pressing the PAUSE button and restarting playback.

The following operate only for DECK II.

: Select this position to record on both sides of the tape.
Auto-reverse is only possible from the [▷] to the [◁] direction. If recording is started in the [◁] direction, the tape will stop automatically at the end of the first side. To record both sides, always start from the [▷] direction.

Level Meter

of "+3 dB" indicates the reference level when using the Dolby NR System.

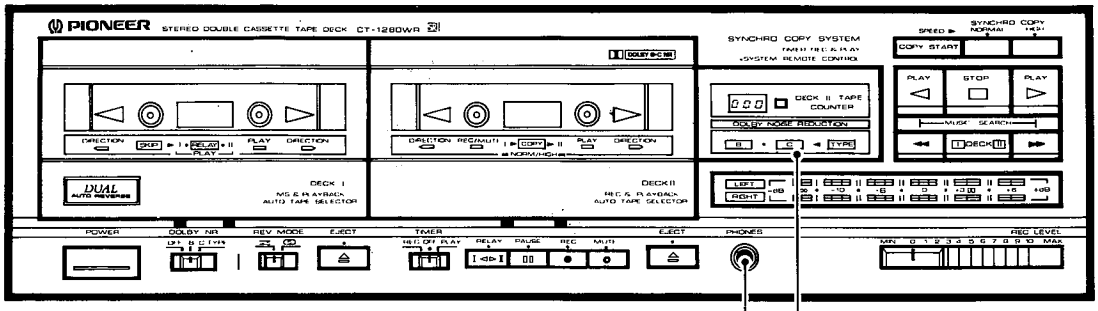
Recording Level Control knob (REC LEVEL)

Counter Reset button

The counter reset only for DECK II.

DECK II TAPE COUNTER

This counter indicates the distance traversed by the tape loaded into DECK II.

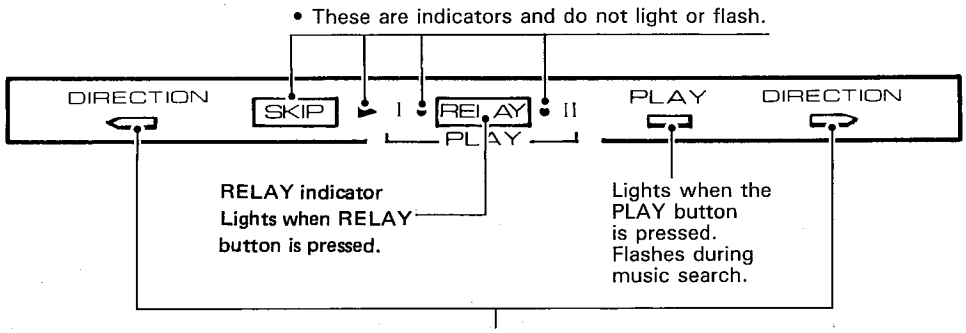


PHONES jack

Dolby NR and dbx indicators

dbx: for only SD, SD/G models

DECK I Tape Travel Mode indicator



The direction of tape travel can be determined by checking which one lights. Indicators light or flash according to tape speed.

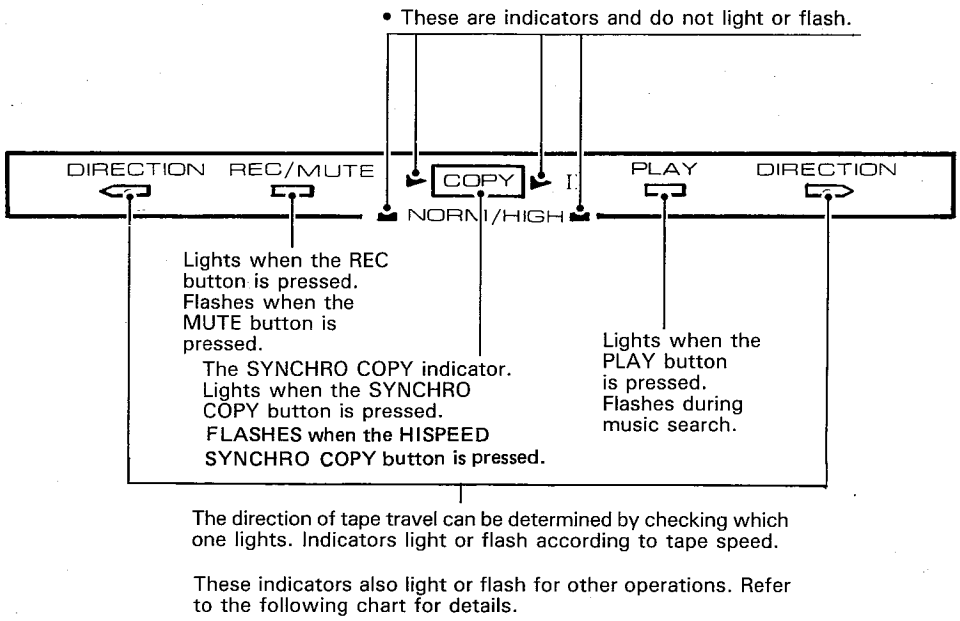
These indicators also light or flash for other operations. Refer to the following chart for details.

DECK I Tape Travel Mode indicator

☆: Light ☆★: Flashes ☆★☆: Flashes rapidly

Indication / Operation	[◁] In Reverse mode			In Forward Mode [▷]		
	DIRECTION	PLAY	DIRECTION	DIRECTION	PLAY	DIRECTION
Stop	☆	—	—	—	—	☆
Playback	☆	☆	—	—	☆	☆
Fast forward	☆★☆	—	—	—	—	☆★☆
Rewind	☆	—	☆★☆	☆★☆	—	☆
Playback pause	☆★	☆	—	—	☆	☆★
MS (music search)	☆★☆	☆★☆	—	—	☆★☆	☆★☆
MS (reverse music search)	☆	☆★☆	☆★☆	☆★☆	☆★☆	☆

DECK II Tape Travel Mode indicator


• These are indicators and do not light or flash.
DIRECTION
REC/MUTE
COPY
NORM/HIGH
PLAY
DIRECTION
Lights when the REC button is pressed. Flashes when the MUTE button is pressed.
The SYNCHRO COPY indicator. Lights when the SYNCHRO COPY button is pressed. FLASHES when the HISPEED SYNCHRO COPY button is pressed.
Lights when the PLAY button is pressed. Flashes during music search.
The direction of tape travel can be determined by checking which one lights. Indicators light or flash according to tape speed.
These indicators also light or flash for other operations. Refer to the following chart for details.

DECK II Tape Travel Mode indicator

☆: Light ☆★: Flashes ☆★☆: Flashes rapidly

Indication / Operation	[◁] In Reverse mode				In Forward Mode [▷]			
	DIRECTION	REC/MUTE	PLAY	DIRECTION	DIRECTION	REC/MUTE	PLAY	DIRECTION
Stop	☆	—	—	—	—	—	—	☆
Playback	☆	—	☆	—	—	—	☆	☆
Recording	☆	☆	—	—	—	☆	—	☆
Fast forward	☆★☆	—	—	—	—	—	—	☆★☆
Rewind	☆	—	—	☆★☆	☆★☆	—	—	☆
Recording pause	☆★	☆	—	—	—	☆	—	☆★
Playback pause	☆★	—	☆	—	—	—	☆	☆★
Recording mute	☆	☆★	—	—	—	☆★	—	☆
MS (music search)	☆★☆	—	☆★☆	—	—	—	☆★☆	☆★☆
MS (reverse music search)	☆	—	☆★☆	☆★☆	☆★☆	—	☆★☆	☆

PRELIMINARY OPERATIONS

TURNING ON THE POWER

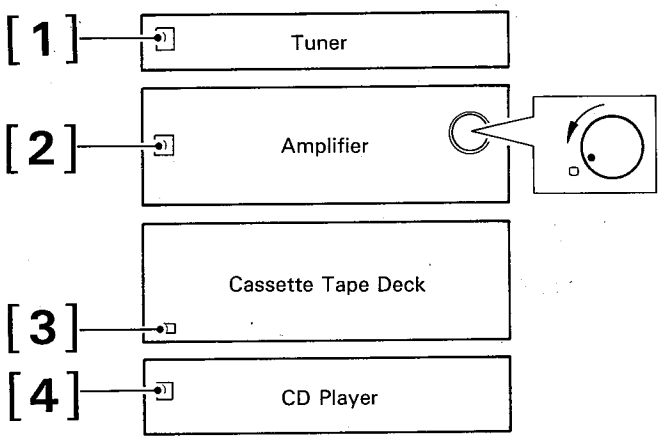
1 **Turn the volume control (VOLUME) of the stereo amplifier to the minimum position.**

2 **Press the POWER switch in the sequence ([1]–[4]) shown in the diagram on the right.**

3 **The indicators of each component (amplifier, cassette tape deck, CD player, etc.) will light.**
- The power is now turned on.

If all of the indicators do not light, recheck all connections.

4 **Set the input selector switch of the amplifier to the desired playback source.**
- To listen to a tape: TAPE
- To record FM, AM, TV: TUNER
- To record a compact disc: CD
- To record a phonograph record, PHONO



AUTOMATIC DECK SELECTOR FUNCTION

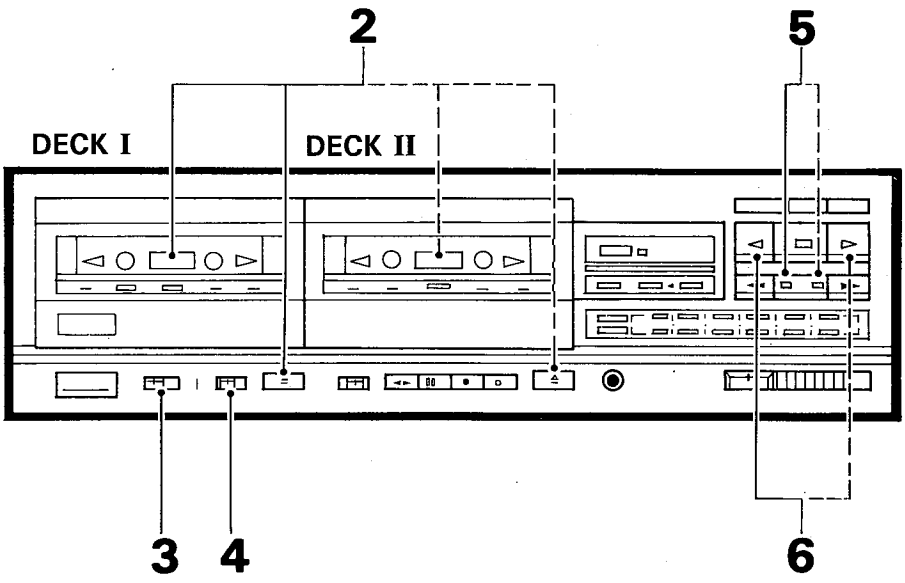
Turn on the power

DECK I will be selected if cassette tapes are loaded into both DECK I and DECK II, or if tapes are not loaded into either deck. Loading a tape into either one of the decks causes that deck to be selected.

Normal Operation Status

Loading a tape into either one of the decks causes that deck to be selected. If tapes are loaded into both decks and one tape is removed, the deck containing the remaining tape will be selected.
DECK I is also selected when the SYNCHRO COPY function is cancelled.
In all other cases, select the desired deck manually using the Deck Selector button.

LISTENING TO CASSETTE TAPES



Is the tape head dirty?
Always keep the tape head clean. See page 20.

SINGLE DECK PLAYBACK

- Playback is possible with either DECK I or DECK II, but not with both decks at the same time.
- If one deck is being used for playback or music search and the Deck Selector button is pressed to select the second deck and the play button of the second deck is pressed, the first deck will stop playing and the second deck will start.

1 **Perform the preliminary operations (see page 10).**

2 **Load a pre-recorded tape into the deck.**

3 **Set the DOLBY NR switch.**
- Always set the DOLBY NR switch to the same position as it was set for recording.
- For SD and SD/G models, the dbx function can be used.

4 **Set the Reverse Mode switch (REV MODE).**

5 **Select the deck to be used.**

6 **Press one of the PLAY buttons ([◁] or [▷]).**
- This operation starts playback in the desired direction ([◁] or [▷]).

■ Press the STOP button (▭) to stop playback.

AUTO-REVERSE MECHANISM

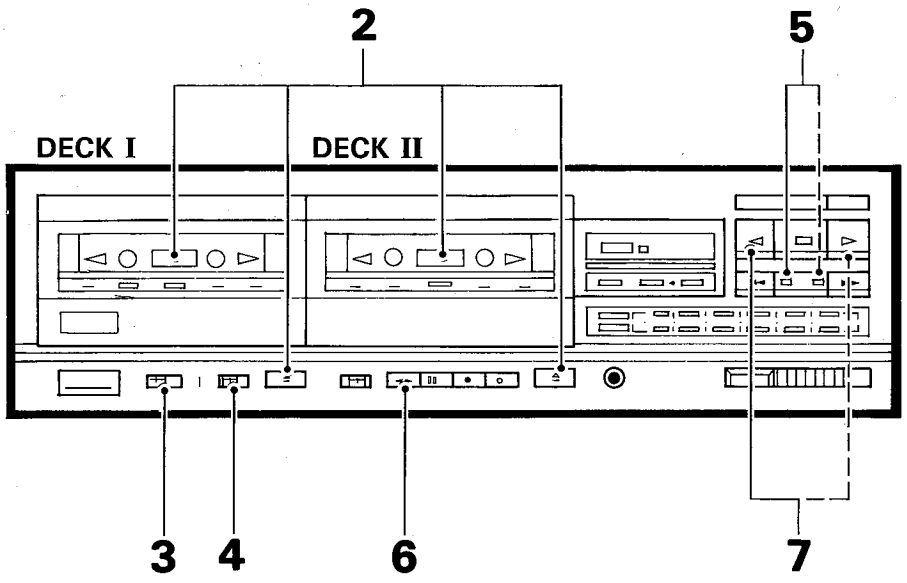
This machine uses a rotary head for both recording and playback. One head is used for both forward [▷] and reverse [◁] operations. A tape end detector system is used to detect the start of auto-reverse operation. The auto-reverse mechanism operates approximately 2 seconds after the tape is fully rewound.

BLANK SKIP FUNCTION

The Blank Skip function operates when the RELAY button is turned on to play back a tape. If there is no sound for more than 15 seconds, that section is skipped and playback resumed at the beginning of the next song.

RELAY PLAYBACK

RELAY PLAYBACK (WHEN USING BOTH DECKS IN SUCCESSION)



- Playback is possible with DECK I, followed by DECK II, or from DECK II to DECK I.
  When one deck finishes playing back and auto-stop is activated, the second deck will automatically search the first song and start playing back.
- If one deck is being used for playback, any number of tapes can be played one after another by replacing its tape with one from the other deck during playback. Convenient for background music (BGM).
- If playback continues for more than 15 seconds with no sound with the RELAY indicator lighted, the Blank Skip function is activated to automatically search the next song and continue playback.

Better sound can be obtained by playing back tapes on the same deck in which they were recorded.

1 **Perform the preliminary operations (see page 10).**

2 **Load pre-recorded tapes into both decks.**

3 **Set the DOLBY NR switch.**
- Always set the DOLBY NR switch to the same position as it was set for recording.
- For SD and SD/G models, **dbx** function can be used.

4 **Set the Reverse Mode switch (REV MODE).**
- When playing back both sides of a tape at the repeat position (⟲), always start playback from the forward (FWD) side . A maximum of 23 sides can be played back by starting at the forward (FWD) side.

5 **Select the deck to be used.**

6 **Press the RELAY button.**
- The RELAY indicator will light.

7 **Press one of the PLAY buttons ([◁] or [▷]).**
- This operation starts playback in the desired direction ([◁] or [▷]).
- Setting the Reverse Mode switch (REV MODE) to the repeat position (⟲), relays to the other deck when the end of the reverse side tape (REV) is reached.

■ Press the RELAY button once more to cancel relay playback. The RELAY Indicator will go out.
■ Press the STOP button (▭) to stop playback.

MUSIC SEARCH

Automatic Music Selection

The music search function detects blank area between songs lasting for more than 4 seconds and activates fast forward or rewind to search the beginning of the next song, then resumes playback. A maximum of 15 songs can be selected in either direction.

• During Forward Playback

When you wish to locate the next song or beyond, press the [▶▶] button as many times as the number of songs to be skipped.
When you wish to listen to the song being currently played from the beginning, press the [◀◀] button once. To return to the previous song or more, press the [◀◀] button as many times as the number of songs to be skipped *plus one*.

• During Reverse Playback

When you wish to locate the next song or beyond, press the [◀◀] button as many times as the number of songs to be skipped.
When you wish to listen to the song being currently played from the beginning, press the [▶▶] button once. To return to the previous song or more, press the [▶▶] button as many times as the number of songs to be skipped *plus one* .

• When Stopped

The above operations are also possible by pressing one of the PLAY button ([◁] or [▷]) to enter the playback mode and then pressing [▶▶] or [◀◀].

- When the [▶▶] or [◀◀] button is pressed during playback, the Deck Selector button indicator will go out temporarily to indicate that input is being received.
- When a button is pressed to search a song with a number larger than the actual number of songs recorded on the tape, both sides of the tape will be searched. After returning to the original side, however, auto-stop will operate at the end of the tape.

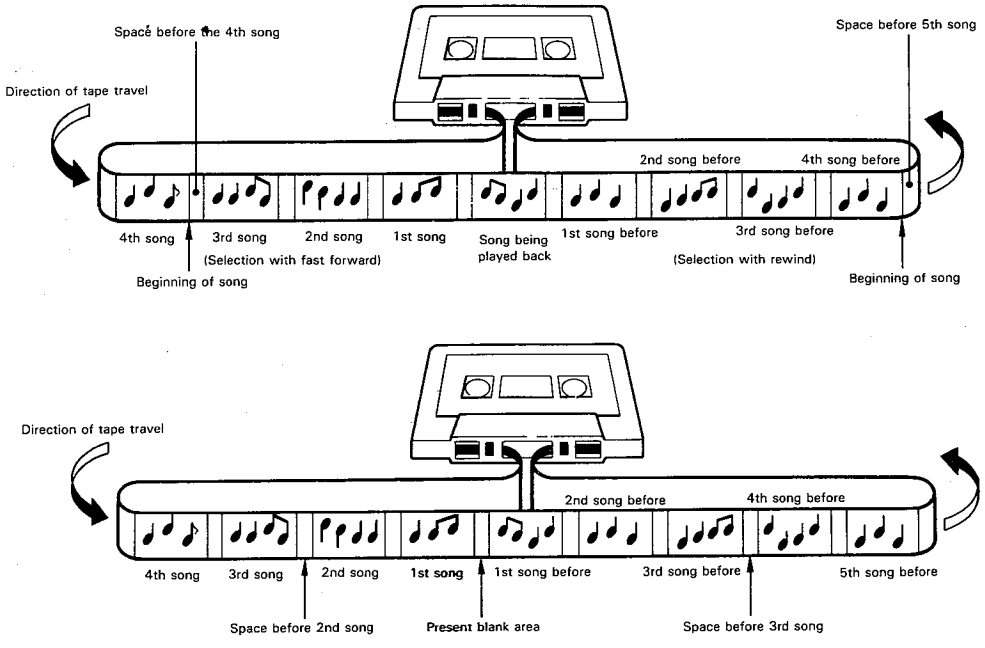
NOTE:
The music selection function will not operate correctly with the following tapes. Although misoperation may occur, the deck is still operating correctly.

- *Tapes with blank areas no longer than 4 seconds between songs.*
- *Tapes with long passages of music at low levels, such as with classic music, that continue for several seconds, or when there is no sound for several seconds within a song.*
- *Tapes with long intervals with no sound, such as for conferences, entertainment programs, etc.*
- *Tapes with noise in blank sections.*

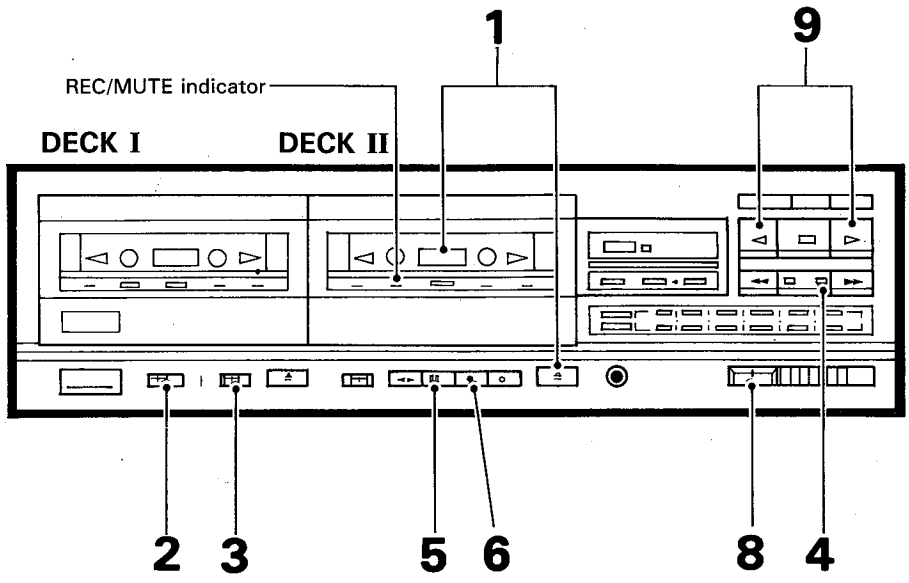
Counting the Number of Songs

Counting the number of songs while playing back
When selecting the 4th song after the present one, for example, the beginning of the 4th song can be discovered by skipping 4 songs. The beginning of the 4th song (in other words, the 5th song) before the present one can be discovered by skipping 5 songs, including the present one.

Counting the number of songs from a blank area
When selecting the 3rd song following, for example, the beginning of the 3rd song can be discovered by skipping 2 songs. The beginning of the 3rd song before can be discovered by skipping 3 songs.



RECORDING ON CASSETTE TAPE



RECORDING USING DECK II

- Recording is not possible when using cassette tapes with a broken erasure-protection tab, even though the REC button (●) is pressed. When recording both sides, make sure that both erase prevention tabs are intact.

1 **Load the cassette tape to be used for recording.**

2 **Set the DOLBY NR switch.**
- For SD and SD/G models, the dbx function can also be used.

3 **Set the Reverse Mode switch (REV MODE).**
- To record both sides of a cassette tape in succession at the (⇄) position, always start recording from the forward (FWD) side because the auto-stop mechanism will operate at the end of the reverse (REV) side tape.

4 **Select DECK II.**

5 **Press the PAUSE button (▯▯).**
- The DIRECTION indicator will flash.

6 **Press the REC button (●).**
- The Recording indicator (REC/MUTE) will light and the machine standby for recording.

7 **Set the stereo amplifier to the source to be recorded.**

8 **Adjust the recording level.**
- Adjust the REC LEVEL control knob in accordance with "RECORDING LEVEL ADJUSTMENT" (see page 15).

9 **Press one of the PLAY buttons ([◁] or [▷])**

- ■ Press the PAUSE button (▯▯) to interrupt recording temporarily. Press the PAUSE button (▯▯) again to resume recording.
- ■ Press the STOP button (▭) to stop recording.

NOTE:
Cassette tapes contain approximately 5 seconds of leader. If both sides are considered, this means that recording is not possible on an area equal to about 12 seconds. Caution is advised, especially when recording on both sides with DECK II.

RECORDING LEVEL ADJUSTMENT

Recording level adjustment is one of the most important factors in obtaining good results. A high recording level is convenient because of the better S/N (signal to noise) ratio and dynamic range (range of sound); however, distortion will occur if the recording level is too high. If the level is kept low to avoid distortion, the tape noise level will be too high and interfere with the quality of the recording. The characteristics of even similar tapes vary, depending on the manufacturer and type, but the characteristics of any tape you use can be optimized by using the highest possible recording level. Adjust the Recording Level Control knob (REC LEVEL) so that the "0 dB" position lights on the level meter. The "+6 dB" position may also light temporarily but this should be disregarded.

Recording Cautions

- *The (DOLBY) of "+3 dB" on the level meter indicates the reference level for the Dolby NR System.*
- *The optimum recording level will vary somewhat depending on the music being recorded and the type of tape. Check the playback quality by listening in order to obtain the best possible recording quality. The feeling of the sound is also important.*
- *The lighting of the level meter may differ for recording and playback but this is due to the slight differences in tape sensitivity and is not a problem.*

AUTOMATIC CREATION OF 4-SECOND BLANK AREAS

Four-second blank areas can be inserted between songs automatically by pressing the REC MUTE button (○) while recording.

- Use this function to create the 4-second blank areas necessary for seaching songs.

1 **When the tape reaches the section where the blank area is to be inserted, press the REC MUTE button (○).**

2 **The tape will stop automatically about 4 seconds later and stand-by for recording.**

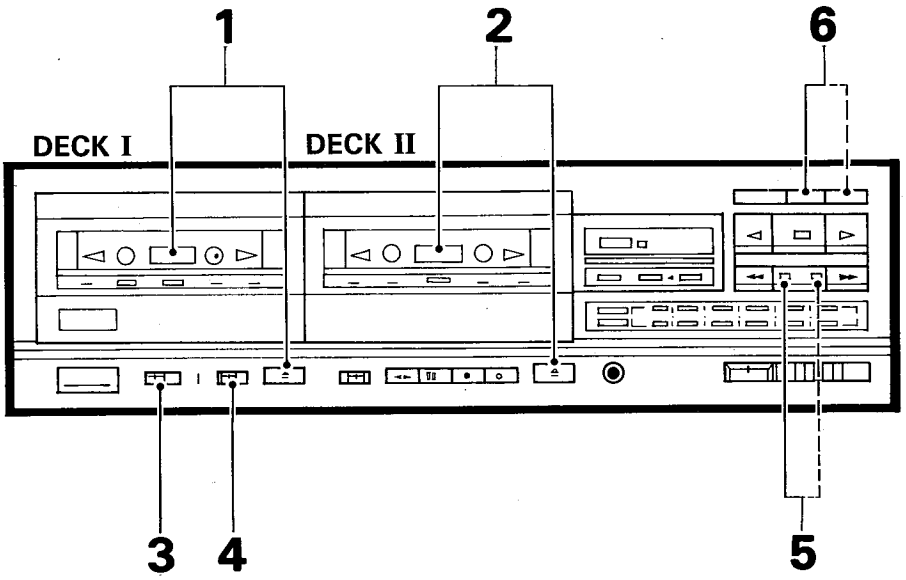
3 **Press the PAUSE button (▯▯) to resume recording.**

• Special Uses for REC MUTE

When a blank area lasts for less than 4 seconds, press the REC MUTE button (○), and then press the PAUSE button (▯▯) when the desired time has elapsed.
When a blank area lasts for more than 4 seconds, adjustment is possible by merely pressing the REC MUTE button (○), waiting for the desired time and then again pressing the REC MUTE button (○). The machine will then standby for recording. Press the PAUSE button (▯▯) to resume recording.
Pressing the REC button (●) while record muting is operating restarts recording from that point.

According to the copyright law, you can only record copyrighted materials for your own pleasure, unless the permission of the person holding the copyright is obtained.

COPYING CASSETTE TAPES



- This function copies cassette tapes from DECK I to DECK II.
- There are two types of tape copying. With one type, the tape is recorded at normal speed while listening. With the other, the copying is performed at double the normal speed and in half the time.
- It is not necessary to adjust the recording level when copying tapes.
- The tape is copied regardless of the position of the amplifier input selector switch. The program source selected with the amplifier input selector switch will be heard from the speakers.
- The tape copy mode is cancelled when one of the decks reaches the end of the tape; therefore, tapes of the same length should be used whenever possible.
- When making multiple copies of the same material, copy from the original tape instead of a copy to avoid loss of quality.

1 **Load the original of the cassette tape to be copied into DECK I.**

2 **Load a cassette tape to be copied to into DECK II.**

3 **Set the DOLBY NR switch.**
- This is not directly related to the copying of the tape but is for monitoring the signal from DECK I at normal speed. The cassette tape in DECK I will be copied to the cassette in DECK II as is, regardless of the position of the DOLBY NR switch. For example, when copying a cassette tape recorded using Dolby C, the tape being copied to in DECK II will also be of the Dolby C type.
- For SD and SD/G models, the **dbx** function can also be used.

4 **Set the Reverse Mode switch (REV MODE).**
- To copy both sides of a tape, set this switch to the (⟲) position.

5 **Set the desired direction of tape travel.**
- When changing the direction of tape travel, press one of the PLAY buttons ([◁] or [▷]) of the deck to be changed and then immediately press the STOP button (▭).
- When copying both sides of a cassette tape in succession with the Reverse Mode switch (REV MODE) set to the (⟲) position, always start from the forward (FWD) side since the auto-stop mechanism will operate when the end of the reverse (REV) side is reached.

6 **Press the SYNCHRO COPY button.**

HIGH: The entire tape will be copied within a short time.

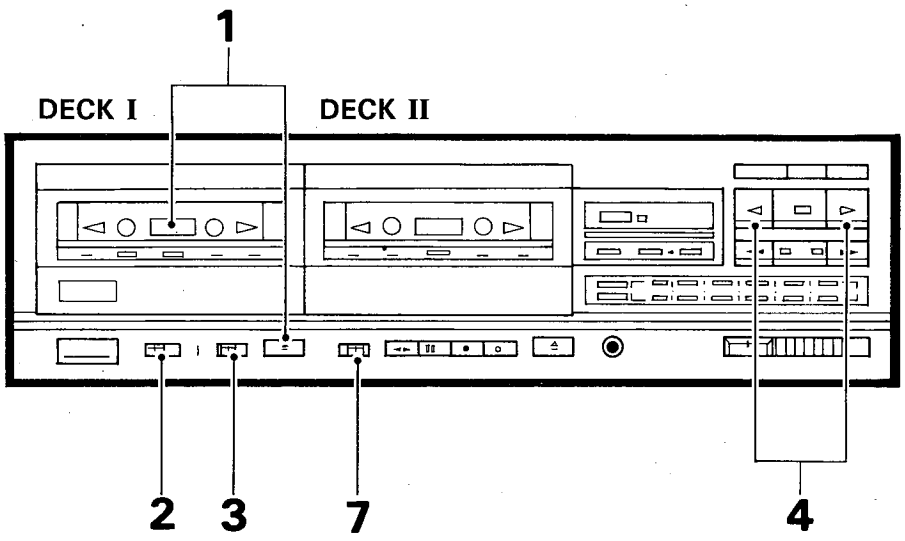
NORMAL: The tape will be copied while listening.
- To listen to a tape while it is being copied, set the stereo amplifier Tape monitor switch to TAPE.
- The REC MUTE (●) and PAUSE buttons (▯▯) affect DECK II during normal speed copying so can be used for simple editing. (Not possible for high-speed copying.)
- Pressing the REC MUTE button (●) while copying inserts about 4-second blank area and puts the deck in standby status. DECK I will continue to play back. Press the PAUSE button (▯▯) to resume recording.
- Only the STOP button (▭) functions during high-speed copying.
- Press the STOP button (▭) to stop the copying process.

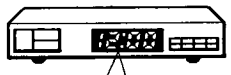
High-speed Copying Cautions

- *If a TV set is operating when using the high-speed copying function of this machine, a high pitched sound may interfere with the recording. In such cases, either use normal speed copying or turn off the TV set power supply.*

PLAYBACK USING AN AUDIO TIMER

WAKE-UP PLAYBACK





6 SET THE AUDIO TIMER

- Procedures may differ somewhat depending on the audio timer used. Be sure to read your timer's operating instructions closely in conjunction with the instructions given here.
- Playback will commence on whichever DECK (I or II) a cassette tape is loaded.
- For timer playback, forward playback will be in effect for both decks.

1 **Load a pre-recorded tape.**
- If both DECK I and II are loaded with a cassette tape, timer playback will commence with DECK I. When the tape in DECK I finishes playing, the tape in DECK II will be played back.
- Press the EJECT button to open the cassette door. Insert a pre-recorded tape and press the door to close it.

2 **Set the DOLBY NR switch as desired (OFF/B/C).**
- Be sure to set the DOLBY NR switch to correspond with the same noise reduction applied when the tape was recorded.
- For SD and SD/G models, the **dbx** function can be used.

3 **Select the desired Reverse Mode switch (REV MODE) (see page 7).**

4 **Press one of the PLAY buttons ([◁] or [▷]).**
- As the unit will start playback, set the volume of the stereo amplifier.

5 **Rewind the tape to the desired point for wake-up playback.**

6 **Set your audio timer.**
- With this operation, power to the components will be turned OFF.

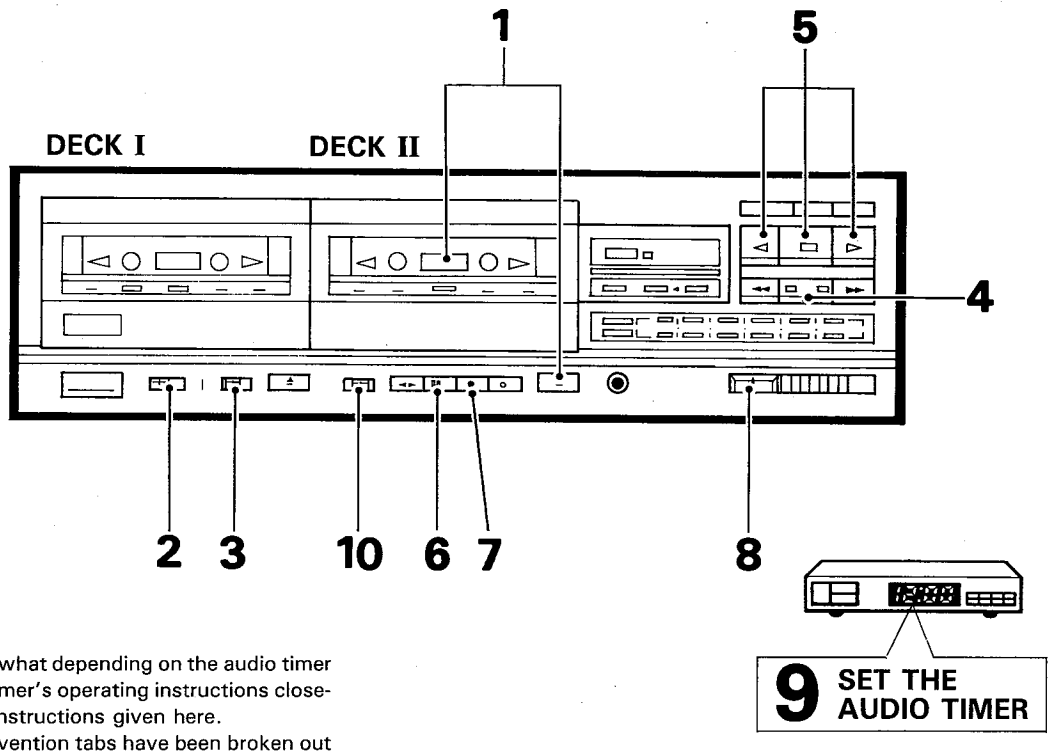
7 **Set the TIMER switch to the PLAY position.**
- At the time set on the audio timer, power to the components will be turned ON, and playback will begin automatically.

- When not using the timer operation, be sure that the TIMER switch is set to the OFF position, If it is set to the REC or PLAY positions, recording or playback will begin immediately whenever the unit's power is turned ON.

RECORDING USING AN AUDIO TIMER

UNATTENDED RECORDING

(The function of DECK II only)



- Procedures may differ somewhat depending on the audio timer used. Be sure to read your timer's operating instructions closely in conjunction with the instructions given here.
- If the accidental erasure prevention tabs have been broken out of the tape shell loaded in the deck, unattended timer recording will not be possible.
- For timer recording, forward (FWD) recording will be in effect.

1 **Load a recording cassette tape.**
- Press the EJECT button to open the cassette door. Insert a recording tape cassette, and press the door to close it.

2 **Set the DOLBY NR switch as desired (OFF/B/C).**
- For SD and SD/G models, the dbx function can be used.

3 **Select the desired Reverse Mode switch (REV MODE) (see page 7).**

4 **Press the deck selector button (part marked [II]).**

5 **Select the tape direction for DECK II.**
- When the Reverse Mode switch (REV MODE) is set to the repeat ( ) position for continuous recording of both sides of a tape, be sure to begin from the forward (FWD) direction (SIDE A [▷]).

6 **Press the PAUSE ([▯▯]) button.**
- The tape DIRECTION indicator will flash.

7 **Press the REC button (●).**
- The Recording indicator (REC/MUTE) will light, and the deck will enter the recording stand-by mode.

8 **Adjust the Recording Level.**
- Use your stereo tuner to select the broadcasting station to be recorded, and set the Recording Level Control knob (REC LEVEL) in accordance with the hints given in the section "Recording Level Adjustment" on page 15.

9 **Set your audio timer.**
- With this operation, the power to the various components will be turned OFF.

10 **Set the TIMER switch to the REC position.**
- At the time set on the audio timer, the power to the components will be turned on, and recording will begin automatically.

- When not using the timer operation, be sure that the TIMER switch is set to the OFF position. If it is set to the REC or PLAY positions, recording or playback will begin immediately whenever the unit's power is turned ON.

NOISE REDUCTION SYSTEMS

This deck is equipped with three noise reduction systems, the dbx, the Dolby NR B and C types.

Dolby NR System

This system was developed in order to reduce the amount of tape hiss noise (primarily high-frequency components) produced during recording. During recording, the high-frequency pianissimo components where noise is most easily noticed are emphasized, and during playback, these emphasized components are attenuated to return the sound to normal. As a result, the noise in the parts emphasized during recording are reduced.
The Dolby NR "B" mode gives its noise-reduction effects in the high range, thus reducing tape hiss noise and expanding the dynamic range. Dolby NR "C" produces its noise-reduction effects from the mid-ranges on up, thus achieving an even greater degree of noise reduction compared to the Dolby NR "B" type.

For only SD, SD/G models

dbx NR system

This system expands the dynamic range by encoding and de-coding throughout the frequency range.
Recording is made encoding the input signal level to half, which will be decoded to double in playback. Since big signals are decoded big and small signals are decoded small, the dynamic range expands greatly and hiss noise will be considerably reduced.

MAINTENANCE

CLEANING THE HEAD, PINCH ROLLER AND CAPSTAN

The heads, pinch rollers and capstans are parts which are liable to get dirty quite easily. In particular, if the heads are dirty, the high-frequency components are not reproduced and the stereo balance is impaired, resulting in a deterioration in the playback sound. It is therefore recommended that the head section be cleaned regularly.

1. Press the EJECT button and open the cassette door.
2. Dip the cleaning swab into the cleaning fluid and use it to wipe the heads, capstans and pinch rollers.

To clean the pinch roller while it is rotating:

Press up the detector lever in the cassette door. Next, press either the forward switch (▷) or the reverse switch (◁).

- In the forward mode, the pinch roller rotates for only about 5 seconds. Press the forward play switch to have the pinch roller rotate once again.
- After rotating and cleaning the pinch roller, press the stop switch. The cassette door will not close unless the stop mode has been set.
- The position of the detector lever is shown in the diagram.

NOTE:

- *After cleaning, do not insert a tape until the cleaning liquid has dried (2 to 3 minutes).*
- *Set the power switches of the connected equipment to OFF.*

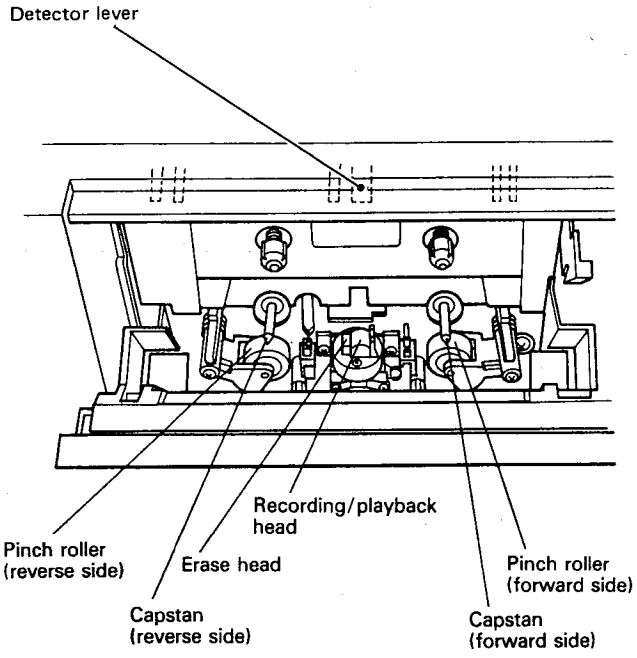
DEMAGNETIZING THE HEADS

After using the cassette deck over a period of time, the heads will become magnetized. The same effect is also caused by bringing a screwdriver, magnet or other magnetized object too near the heads. This causes loss of high-frequency sound during recording and playback, and is also a cause of interference noise. The heads should be regularly demagnetized with a head demagnetizer (eraser) which can be purchased at your dealer.

When demagnetizing the heads, be sure the cassette deck's POWER switch is in the OFF position. For detailed instructions, consult the operating manual for your head demagnetizer (eraser).

CLEANING THE FRONT PANEL SECTION

Wipe the front panel and the cassette door when dusty or greasy with a soft cloth containing a small amount of ordinary washing-up liquid. Then, wipe dry with a cloth. Never use volatile spirits like thinners, benzine or alcohol because they will damage the panel's finish.



TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Probable Cause	Remedy
The cassette door will not open.	• Mechanism not at stop position. • Power turned off with tape moving.	• Press the STOP button (▭). • Turn the power on and press the STOP button.
The cassette door will not close.	• Cassette tape not properly loaded.	• Reload the cassette tape.
The tape will not move.	• The deck of which the operation switches are being used is not in the proper mode. • Tape is being taken up. • Cassette tape not properly loaded. • The tape is slack.	• Put the deck being used in the proper mode. • Rewind the tape or change the direction of tape travel. • Reload the cassette tape. • Use a pencil, etc., to wind the tape and take up the slack.
Cannot playback (tape moves).	• The tape loaded has not yet been recorded. • The stereo amplifier not properly connected. • The head is dirty.	• Replace the tape. • Check the connections. • Clean the head.
Cannot record.	• The erasure-prevention tab of the cassette is broken. • The Recording Level Control knob (REC LEVEL) is set to "0". • The stereo amplifier not properly connected. • The recording source setting on the stereo amplifier is incorrect. • The head is dirty.	• Replace the cassette tape or place tape over the tab opening. • Slide the knob to the right. • Check the connections. • Operate in accordance with "Recording on Cassette Tape" on page 14. • Clean the head.
Sounds from before new recording remain.	• The head is dirty.	• Clean the head.
No high range sound (sound cloudy).	• A tape not recorded with Dolby NR System is being played with the DOLBY NR switch on. • The head is dirty.	• Set the DOLBY NR switch correctly. • Clean the head.
High range emphasized.	• A tape recorded with Dolby NR system is being played with the DOLBY NR switch off.	• Set the DOLBY NR switch correctly.
Sound distorted.	• Distortion in the recorded tape itself. • Recording level too high. • The head is dirty.	• Try replacing the cassette tape. • Lower the recording level and re-record. • Clean the head.
Sound wavers, skips.	• The head, pinch roller and capstan are dirty. • There is tape slack.	• Clean. • Rewind or fast forward the tape to take up the tape slack.
Excessive noise.	• Noisy tape is being used. • A connecting cord is not properly connected. • The recording level is too low. • The head is dirty. • The head is magnetized.	• Replace the cassette. • Inspect all input and output connections to make sure all cords are correctly connected. • Raise the recording level and re-record. • Clean the head. • Demagnetize with a head eraser.
Cannot select songs.	• The cassette tape being used does not have 4-second blank spaces between songs.	• Replace with a cassette having blank areas of 4 seconds or more.
Tape starts moving when power is turned on.	• The TIMER switch is on.	• Turn off the TIMER switch.

SPECIFICATIONS

Systems ..... 4 track, 2-channel stereo
Heads ..... "Hard Permalloy" recording/playback head × 1
"Hard Permalloy" playback head × 1
"Ferrite" erasing head × 1
Motor ..... DC servo motor × 2
Wow and Flutter ..... No more than 0.075 % (WRMS)
No more than ±0.19% (DIN)
Fast winding Time ..... Approximately 100 seconds
(C-60 tape)
Frequency Response
−20 dB recording:
Normal tape ..... 25 to 15,000 Hz
Chrome tape ..... 25 to 16,000 Hz
Metal tape ..... 25 to 16,000 Hz
0 dB recording:
Normal tape ..... 25 to 11,000 Hz
Chrome tape ..... 25 to 13,000 Hz
Metal tape ..... 25 to 15,500 Hz
Signal-to-Noise Ratio
Dolby NR OFF ..... More than 56 dB
dbx ON ..... 92 dB
(SD, SD/G models only)
Noise Reduction Effect
Dolby NR B type ON ..... More than 10 dB (at 5 kHz)
Dolby NR C type ON ..... More than 19 dB (at 5 kHz)
Dynamic Range (dbx ON) ..... 110 dB
(SD, SD/G models only)
Harmonic Distortion ..... No more than 0.7% (0 dB)
Input (Sensitivity)
LINE (INPUT) ..... 63 mV (Input impedance 51 kΩ)
Output (Reference level)
LINE (OUTPUT) ..... 316 mV (Output impedance 5.5 kΩ)
Headphone ..... 45 mV (Load impedance 8 Ω)

Subfunctions

- Relay playback (DECK I ⇄ DECK II)
- High-speed and normal-speed tape copying (DECK I → DECK II)
- Skip search/Music search (DECK I, DECK II)
- Noise reduction systems (Dolby NR B/C types)
- Noise reduction system (dbx, Dolby NR B/C types) (SD, SD/G models only)
- System remote control available (European, U.K., Australian models are not provided)
- Auto tape selector (DECK I, DECK II)
- Timer function (Unattended recording: DECK II) (Wake-up playback: DECK I and DECK II)
- Headphone jack
- Automatic recording mute function (DECK II)
- Automatic DECK I/II selector
- Tape counter (DECK II)
- Level meter (5 seg/ch.)

Miscellaneous

Power Requirements
U.S., Canadian models ..... AC 120 V, 60 Hz
European model ..... AC 220 V, 50/60 Hz
U.K., Australian models ..... AC 240 V, 50/60 Hz
U.S. military and other destination models
AC 110 V/120 V−127 V/220 V/240 V, 50/60 Hz (swichable)
Power Consumption
U.S., Canadian models ..... 23 W
European, U.K., Australian models ..... 23 W
U.S. military, other destination models ..... 23 W
Dimensions ..... 420 (W) × 120 (H) × 263 (D) mm
16-9/16 (W) x 4-3/4 (H) x 10-3/8 (D) in
Weight (without package) ..... 4.4 kg (9 lb 11 oz)

Accessories

Operating instructions 1
Connection cord with pin plugs 2
Control cord (European, U.K., Australian models are not provided) 1

NOTE:
Specifications and design subject to possible modifications without notice due to improvements.

INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

<RRB1006>

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Printed in Japan <RRB1006-D>